Markus Mk Kowalewski

List of Publications by Citations

57 papers	1,145 citations	19 h-index	32 g-index
69 ext. papers	1,371 ext. citations	5.9 avg, IF	5.02 L-index

#	Paper	IF	Citations
57	Cavity Femtochemistry: Manipulating Nonadiabatic Dynamics at Avoided Crossings. *Journal of Physical Chemistry Letters*, **2016**, 7, 2050-4	6.4	116
56	Non-adiabatic dynamics of molecules in optical cavities. *Journal of Chemical Physics*, **2016**, 144, 054309	3.9	88
55	Catching Conical Intersections in the Act: Monitoring Transient Electronic Coherences by Attosecond Stimulated X-Ray Raman Signals. *Physical Review Letters*, **2015**, 115, 193003	7.4	87
54	Simulating Coherent Multidimensional Spectroscopy of Nonadiabatic Molecular Processes: From the Infrared to the X-ray Regime. *Chemical Reviews*, **2017**, 117, 12165-12226	68.1	77
53	Monotonic convergent optimal control theory with strict limitations on the spectrum of optimized laser fields. *Physical Review Letters*, **2008**, 101, 073002	7.4	66
52	Novel photochemistry of molecular polaritons in optical cavities. *Faraday Discussions*, **2016**, 194, 259-282	3.6	62
51	Cavity cooling of internal molecular motion. *Physical Review Letters*, **2007**, 99, 073001	7.4	61
50	Optimal control theory--closing the gap between theory and experiment. *Physical Chemistry Chemical Physics*, **2012**, 14, 14460-85	3.6	55
49	Monitoring nonadiabatic avoided crossing dynamics in molecules by ultrafast X-ray diffraction. *Structural Dynamics*, **2017**, 4, 054101	3.2	37
48	Monitoring molecular nonadiabatic dynamics with femtosecond X-ray diffraction. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6538-6547	11.5	37
47	A molecular conveyor belt by controlled delivery of single molecules into ultrashort laser pulses. *Nature Physics*, **2012**, 8, 238-242	16.2	34
46	Manipulating molecules with quantum light. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 3278-3280	11.5	31
45	Multidimensional resonant nonlinear spectroscopy with coherent broadband x-ray pulses. *Physica Scripta*, **2016**, T169, 014002	2.6	25
44	Ultrafast dynamics in the vicinity of quantum light-induced conical intersections. *New Journal of Physics*, **2019**, 21, 093040	2.9	25
43	Monitoring Nonadiabatic Electron-Nuclear Dynamics in Molecules by Attosecond Streaking of Photoelectrons. *Physical Review Letters*, **2016**, 117, 043201	7.4	24
42	. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 119-129	3.8	21
41	Nucleophilic substitution dynamics: comparing wave packet calculations with experiment. *Journal of Physical Chemistry A*, **2014**, 118, 4661-9	2.8	20

40	Chemoselective quantum control of carbonyl bonds in Grignard reactions using shaped laser pulses. *Physical Chemistry Chemical Physics*, **2010**, 12, 15780-7	3.6	20
39	X-Ray Sum Frequency Diffraction for Direct Imaging of Ultrafast Electron Dynamics. *Physical Review Letters*, **2018**, 120, 243902	7.4	19
38	Probing electronic and vibrational dynamics in molecules by time-resolved photoelectron, Auger-electron, and X-ray photon scattering spectroscopy. *Faraday Discussions*, **2015**, 177, 405-28	3.6	18
37	Quantum Dynamics of a Photochemical Bond Cleavage Influenced by the Solvent Environment: A Dynamic Continuum Approach. *Journal of Physical Chemistry Letters*, **2014**, 5, 3480-5	6.4	17
36	Nonadiabatic Dynamics May Be Probed through Electronic Coherence in Time-Resolved Photoelectron Spectroscopy. *Journal of Chemical Theory and Computation*, **2016**, 12, 740-52	6.4	16
35	Stimulated Raman signals at conical intersections: Ab initio surface hopping simulation protocol with direct propagation of the nuclear wave function. *Journal of Chemical Physics*, **2015**, 143, 044117	3.9	15
34	Attosecond X-ray Diffraction Triggered by Core or Valence Ionization of a Dipeptide. *Journal of Chemical Theory and Computation*, **2018**, 14, 329-338	6.4	13
33	Photoinduced molecular chirality probed by ultrafast resonant X-ray spectroscopy. *Structural Dynamics*, **2017**, 4, 044006	3.2	12
32	Direct Transition from Triplet Excitons to Hybrid Light-Matter States via Triplet-Triplet Annihilation. *Journal of the American Chemical Society*, **2021**, 143, 7501-7508	16.4	12
31	Comment on "Self-Referenced Coherent Diffraction X-Ray Movie of Ångstrom- and Femtosecond-Scale Atomic Motion". *Physical Review Letters*, **2017**, 119, 069301	7.4	11
30	Searching for pathways involving dressed states in optimal control theory. *Faraday Discussions*, **2011**, 153, 159-71; discussion 189-212	3.6	11
29	Atom Assisted Photochemistry in Optical Cavities. *Journal of Physical Chemistry A*, **2020**, 124, 4672-4677	2.8	10
28	Cavity sideband cooling of trapped molecules. *Physical Review A*, **2011**, 84,	2.6	10
27	Transition-Metal-Free Boron–Carbon Bond Activation: Insertion of an NNP Fragment into a Boron–Carbon Bond. *European Journal of Inorganic Chemistry*, **2007**, 2007, 5319-5322	2.3	10
26	Cavity cooling of translational and ro-vibrational motion of molecules: ab initio-based simulations for OH and NO. *Applied Physics B: Lasers and Optics*, **2007**, 89, 459-467	1.9	10
25	Simulating photodissociation reactions in bad cavities with the Lindblad equation. *Journal of Chemical Physics*, **2020**, 153, 234304	3.9	10
24	Phase Cycling RT-TDDFT Simulation Protocol for Nonlinear XUV and X-ray Molecular Spectroscopy. *Journal of Physical Chemistry Letters*, **2018**, 9, 1072-1078	6.4	9
23	Diffraction-Detected Sum Frequency Generation: Novel Ultrafast X-ray Probe of Molecular Dynamics. *Journal of Physical Chemistry Letters*, **2018**, 9, 3392-3396	6.4	7

22	Quantum control with quantum light of molecular nonadiabaticity. *Physical Review A*, **2019**, 100,	2.6	6
21	Current vs Charge Density Contributions to Nonlinear X-ray Spectroscopy. *Journal of Chemical Theory and Computation*, **2016**, 12, 3959-68	6.4	5
20	Reinvestigation of hydrazinium tetrafluoroborate. *Acta Crystallographica Section E: Structure Reports Online*, **2006**, 62, i248-i249		5
19	Impulsive UV-pump/X-ray probe study of vibrational dynamics in glycine. *Scientific Reports*, **2018**, 8, 15466	4.9	5
18	Imaging of transition charge densities involving carbon core excitations by all X-ray sum-frequency generation. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20170470	3	3
17	Molecular wave packet dynamics decelerated by solvent environment: A theoretical approach. *EPJ Web of Conferences*, **2013**, 41, 05043	0.3	3
16	Capturing fingerprints of conical intersection: Complementary information of non-adiabatic dynamics from linear x-ray probes. *Structural Dynamics*, **2021**, 8, 034101	3.2	3
15	Electronic and non-adiabatic dynamics: general discussion. *Faraday Discussions*, **2016**, 194, 209-257	3.6	3
14	Controlling the Photostability of Pyrrole with Optical Nanocavities. *Journal of Physical Chemistry A*, **2021**, 125, 1142-1151	2.8	3
13	Time-Resolved Photoelectron Spectroscopy of Conical Intersections with Attosecond Pulse Trains. *Journal of Physical Chemistry Letters*, **2021**, 12, 8103-8108	6.4	3
12	Spectroscopic Investigations of High-Nitrogen Compounds for Near-Infrared Illuminants. *Propellants, Explosives, Pyrotechnics*, **2014**, 39, 166-172	1.7	2
11	An adaptive interpolation scheme for molecular potential energy surfaces. *Journal of Chemical Physics*, **2016**, 145, 084104	3.9	2
10	Multiscale wavelet decomposition of time-resolved X-ray diffraction signals in cyclohexadiene. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 10269-10274	11.5	2
9	Wave packet simulations of antiproton scattering on molecular hydrogen. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2015**, 48, 195204	1.3	1
8	Sustainable packaging of quantum chemistry software with the Nix package manager. *International Journal of Quantum Chemistry*,	2.1	1
7	Multi-wave mixing in the high harmonic regime: monitoring electronic dynamics. *Optics Express*, **2021**, 29, 4746-4754	3.3	1
6	Photoinduced bond oscillations in ironpentacarbonyl give delayed synchronous bursts of carbonmonoxide release.. *Nature Communications*, **2022**, 13, 1337	17.4	0
5	Direct imaging of ultrafast electron dynamics by X-ray sum frequency generation. *EPJ Web of Conferences*, **2019**, 205, 03004	0.3	

List of Publications

4	Monitoring nonadiabatic dynamics in molecules by ultrafast X-Ray diffraction. *EPJ Web of Conferences*, **2019**, 205, 09032	0.3
3	Vibrational Energy Transfer Through Molecular Chains: An Approach Toward Scalable Information Processing. *Advances in Chemical Physics*, **2014**, 371-402	
2	Femtosecond pump-probe spectroscopy for single trapped molecular ions. *EPJ Web of Conferences*, **2013**, 41, 02028	0.3
1	Structural dynamics: general discussion. *Faraday Discussions*, **2016**, 194, 583-620	3.6